New England Waste Services of ME, Inc.
d/b/a Pine Tree Landfill
Penobscot County
Hampden, Maine
A-850-77-3-A

Departmental
Findings of Fact and Order
New Source Review
Amendment #3

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	New England Waste Services of ME, Inc. d/b/a Pine Tree Landfill (PTL)
PART 70 LICENSE NUMBER	A-850-70-A-I
LICENSE TYPE	Chapter 115 Major Modification
NAICS CODES	562212
NATURE OF BUSINESS	Solid Waste Landfill
FACILITY LOCATION	Hampden, Maine
PART 70 LICENSE ISSUANCE DATE	June 9, 2003
NSR AMENDMENT ISSUANCE DATE	

B. Amendment Description

PTL operates a landfill gas collection system. The collected gases are currently controlled by a 90 MMBtu/hr flare. PTL is also currently in the process of installing a wet scrubbing system for control of TRS/SO_2.

PTL has proposed the installation of three landfill gas-to-energy (LFGTE) Jenbacher (JGS 320) engines. The proposed LFGTE project will divert landfill gas from the flare (after the wet scrubbing system) to the LFGTE facility where it will provide fuel for up to three internal combustion reciprocating engine generator units. The engines are each rated at 10.8 MMBtu/hr firing landfill gas comprised of approximately 50% methane (CH_4). The engines are also licensed to fire natural gas and propane. The existing flare will operate simultaneously with the engines to combust any remaining landfill gas and to flare the landfill gas when the engines are unavailable.

C. Application Classification

The application for PTL does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing or record keeping. This application does seek to modify and establish a Best Available Control Technology (BACT) analysis performed per New Source Review.

Additionally, the modification of a major source is considered a major modification based on whether or not expected emissions increases exceed the "Significant Emission Increase Levels" as given in *Definitions Regulation*, 06-096 CMR 100 (last amended December 1, 2005).

The emission increases are determined by subtracting baseline emissions from the maximum future license allowed emissions. PTL does not have data sufficient to accurately quantify 2005 emissions. It was therefore determined that the most representative baseline emissions would be from average data collected in 2006.

Pollutant	Past Actuals based on 2006 (ton/year)	Future Permit (ton/year)	Net Change (ton/year)	Significance Level (ton/year)
PM	3.4	9.1	+5.6	25
PM_{10}	3.4	9.1	+5.6	15
SO_2	194.6	25.0	-169.6	40
NO_x	8.1	31.8	+23.8	40
CO	74.7	175.5	+100.8	100
VOC	1.5	41.4	+39.9	40

The Significant Emission Increase Level for CO is 100 ton/year and for SO_2 is 40 ton/year. The net change in CO emissions is 100.8 ton/year. Therefore, this amendment was determined to be a major modification for CO.

PTL previously modified their license to install equipment at the landfill and the resultant actual emissions of SO_2 increased by more than 40 ton/year. Therefore, the Department determined to also process this application as a major modification for SO_2 even though emissions of SO_2 remain limited to 25.0 ton/year.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in 06-096 CMR 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. SO_2 Control

PTL previously permitted the installation of a wet scrubbing system manufactured by NATCO Group, Inc. This scrubbing system is designed to remove total reduced sulfur (TRS) compounds from the landfill gas and thereby reduce the facility's emissions of SO_2.

New Source Review (NSR) air emission license A-850-77-4-M issued June 5, 2007 required PTL to have one Thiopaq scrubber installed and operating by July 31, 2007 and other additional units installed and operating as necessary to meet a January 1, 2008 testing deadline. Design changes caused PTL to switch from a plan involving several small Thiopaq units (mini-paq units) to one larger contact unit with several associated bioreactor units. This change has pushed back construction and installation of the equipment.

SO_2 emissions from the flare and/or engines will be determined based on the TRS levels in the landfill gas after scrubbing. TRS levels in the gas will be measured at the inlet and outlet of the scrubber twice per month. Each of the sampling events will be conducted on a single day (with no less than seven days between events) and will consist of three separate samples collected in opaque tedlar bags at the inlet to the scrubber and three separate samples collected at the outlet of the scrubber (six total samples collected on each day, twice per month) with subsequent laboratory analyses for TRS compounds by ASTM-D5504 and ASTM-D1945 or equivalent method approved by the Department. The average of the results for the three samples collected at each location, in conjunction with the average hourly total gas flow rate that day, will be used to determine the lbs/hour of SO_2 emissions from the engines and flare, the ppm of SO_2 in the gas stream before and after control, and the control efficiency of the TRS removal system.

Periodic monitoring of the TRS control equipment includes H_2S concentrations before and after the equipment. This information is intended to be used for operational purposes and not to demonstrate compliance with any standard. Further, it is the Department's intent that this information be collected using an H_2S analyzer. However, should the analyzer be unavailable due to malfunction, PTL may use Draeger tubes to collect this data.

Because the SO_2 emissions are dependent on the total flow and the performance of the scrubber, and not factors specific to the operation of the engines or flare (unlike emissions of the other criteria pollutants), BACT was based on a TRS removal efficiency standard for the scrubber and a combined, total lbs/hour SO_2 limit for the engines and flare.

PTL currently intends to cease accepting waste by 2010. The landfill will be closed soon thereafter. TRS levels in the landfill gas are expected to decrease over time after the landfill ceases accepting waste. At that time scrubbing of TRS may become decreasingly cost-effective as TRS levels decrease. Therefore, BACT was determined to be a TRS scrubbing efficiency of 85% or to a level of 200 ppm, whichever is less stringent. If monthly testing of TRS shows that levels have remained below 200 ppm for greater than 12 continuous months, PTL may submit a request to the Department to discontinue scrubbing.

In addition, PTL has requested the flexibility to operate other temporary or additional TRS control equipment if necessary to meet the January 1, 2008 testing deadline or for cases of TRS control equipment downtime or temporary surges in landfill gas flow or TRS concentration. The Department has agreed to PTL's request for operational flexibility provided the Department is notified and licensed emission limits and control efficiencies are met.

C. Landfill Gas-Fired Engines

The Landfill Gas-fired Engines are Jenbacher Model JGS 320 engines. Each engine has a maximum heat input of 10.8 MMBtu/hr firing landfill gas comprised of 50% CH_4.

PTL performed a BACT analysis for the engines. As part of that analysis they considered two possible control technologies, selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR). It was determined that neither of these (nor any other) control technology are currently technically feasible for control of NO_x emissions from landfill gas-fired engines. However, the BACT emission limits proposed by PTL are still more stringent than BACT limits

established recently in California for similar units and any entry listed in EPA's RACT/BACT/LAER Clearinghouse.

Streamlining

1. Opacity
   Visible Emissions Regulation, 06-096 CMR 101 (last amended April 27, 2003) Section (2)(B)(1)(d) contains the only applicable opacity standard. **No streamlining requested.**

2. PM
   a. *Fuel Burning Equipment Particulate Emission Standard,* 06-096 CMR 103 (last amended September 26, 1990) establishes an applicable PM lb/MMBtu emission limit.
   b. BACT established an applicable PM lb/MMBtu emission limit.

   PTL accepts streamlining for the PM lb/MMBtu standard. The BACT limit is the most stringent and is therefore the only PM lb/MMBtu emission limit included in this license.

   c. BACT establishes the only applicable PM lb/hr emission limit.
      No streamlining requested.

3. PM_{10}
   BACT establishes the only applicable PM_{10} lb/hr emission limit.
   No streamlining requested.

4. SO_2
   BACT establishes the only applicable SO_2 lb/hr emission limit and control efficiency requirement.
   No streamlining requested.

5. NO_x
   BACT establishes the only applicable NO_x lb/hr emission limit. **No streamlining requested.**

6. CO
   a. BACT establishes the only applicable CO lb/hr emission limit. **No streamlining requested.**
   b. BACT establishes the only applicable CO g/bhp-hr emission limit. **No streamlining requested.**

Periodic Monitoring
Periodic monitoring shall consist of record keeping which includes records of maintenance performed on each engine, monthly records of operating time for each engine, gas flow to the flare and engines on a monthly basis, and H_2S concentration and gas flow to and from the TRS control equipment twice per day. Periodic monitoring shall also include twice monthly sampling of the landfill gas at the scrubber inlet and outlet for TRS.

Based on manufacturer's assurances it is unlikely that the engines will exceed the emission limits listed in this license for PM, NO_x, CO and VOC. Therefore, periodic monitoring by the source for these pollutants is not required. However, neither the EPA nor the State is precluded from requesting PTL to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors
There are no Parameter Monitors required for the engines.

CEMS and COMS
There are no CEMS or COMS required for the engines

Control Equipment
There is no post combustion add-on control equipment required for the engines.

D. Annual Emissions
PTL shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emission for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Total TPY	**9.1**	**9.1**	**25.0**	**31.8**	**175.5**	**41.4**

III. AMBIENT AIR QUALITY ANALYSIS

A. Overview

A refined modeling analysis was performed to show that emissions from PTL, in conjunction with other sources, will not cause or contribute to violations of Maine Ambient Air Quality Standards (MAAQS) for SO_2, PM_{10}, NO_2 or CO or to Class II increments for SO_2, PM_{10} or NO_2.

Based upon the distance from PTL to the nearest Class I area (53 kilometers) and the magnitude of emissions increase, the affected Federal Land Managers (FLMs) and MEDEP-BAQ have determined that an assessment of Class I increment standards and Air Quality Related Values (AQRVs) is not required.

B. Model Inputs

The AERMOD-PRIME refined model was used to address standards and increments in all areas. The modeling analysis accounted for the potential of building wake and cavity effects on emissions from all modeled stacks that are below their calculated formula GEP stack heights.

All modeling was performed in accordance with all applicable requirements of the Maine Department of Environmental Protection, Bureau of Air Quality (MEDEP-BAQ) and the United States Environmental Protection Agency (USEPA).

A valid 5-year hourly off-site meteorological database was used in the AERMOD-PRIME refined modeling analysis. Wind data was collected at a height of 10 meters at the Bangor National Weather Service (NWS) meteorological monitoring site during the 5-year period 2000-2004. All missing data were interpolated or coded as missing, per EPA guidance. Hourly cloud cover and ceiling height data, collected at the Caribou NWS site, were used to determine stability.

The surface meteorological data was combined with concurrent hourly cloud cover and upper-air data obtained from the Caribou National Weather Service (NWS). Missing cloud cover and/or upper-air data values were interpolated or coded as missing, per EPA guidance.

All necessary representative micrometeorological surface variables for inclusion into AERMET (surface roughness, Bowen ratio and albedo) were calculated by MEDEP from procedures recommended by USEPA.

Point-source parameters, used in the modeling for PTL are listed in Table III-1.

TABLE III-1 : Point Source Stack Parameters

Facility/Stack	Stack Base Elevation (m)	Stack Height (m)	GEP Stack Height (m)	Stack Diameter (m)	UTM Easting NAD83 (km)	UTM Northing NAD83 (km)
CURRENT/PROPOSED						
IV. Pine Tree Landfill						
Stack #1	43.28	15.24	19.05	0.36	510.922	4957.062
Stack #2	43.28	15.24	19.05	0.36	510.922	4957.058
Stack #3	43.28	15.24	19.05	0.36	510.921	4957.054
Flare	42.67	12.80	19.65	0.30	510.925	4957.009
1987 BASELINE						
Pine Tree Landfill						
PTL had no emissions sources in the 1987 baseline year, no credit to be taken.						
1977 BASELINE						
Pine Tree Landfill						
PTL had no emissions sources in the 1977 baseline year, no credit to be taken.						

Emission parameters for PTL for MAAQS and increment modeling are listed in Table III-2. The emission parameters for PTL are based on the maximum license allowed (worst-case) operating configuration, which accounts for the operation of three electrical generating engines and the flare. For the purposes of determining PM_{10} and NO_2 impacts, all PM and NO_x emissions were conservatively assumed to convert to PM_{10} and NO_2, respectively.

TABLE III-2 : Stack Emission Parameters

Facility/Stack	Averaging Periods	SO_{2*} (g/s)	PM_{10} (g/s)	NO_2 (g/s)	CO (g/s)	Stack Temp (K)	Stack Velocity (m/s)
MAXIMUM LICENSE ALLOWED							
Pine Tree Landfill							
Stack #1	All	0.09	0.06	0.24	1.12	785.37	14.30
Stack #2	All	0.09	0.06	0.24	1.12	785.37	14.30
Stack #3	All	0.09	0.06	0.24	1.12	785.37	14.30
Flare	All	0.74	0.19	0.45	4.20	1273.15	20.00
BASELINE – 1987							
Pine Tree Landfill							
PTL had no emissions sources in the 1987 baseline year, no credit to be taken.							
BASELINE – 1977							
Pine Tree Landfill							
PTL had no emissions sources in the 1977 baseline year, no credit to be taken.							

* The maximum license allowed limit is 5.71 lbs/hour which applies to the combined total emissions from the three engines and the flare.

C. Single Source Modeling Impacts

AERMOD-PRIME refined modeling, using 5 years of sequential meteorological data, was performed for the worst-case operating scenario, which accounts for the operation of all three electrical generating engines and the flare.

The modeling results for PTL alone are shown in Tables III-3. Maximum predicted impacts that exceed their respective significance level are indicated in boldface type. No further modeling was required for pollutant/terrain combinations that did not exceed their respective significance levels.

TABLE III-3 : Maximum AERMOD-PRIME Impacts from PTL Alone

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Class II Significance Level ($\mu g/m^3$)
SO_2	3-hour	**48.06**	510.890	4957.030	42.31	**25**
	24-hour	**33.10**	510.900	4957.040	42.06	**5**
	Annual	**5.36**	510.918	4957.050	41.97	**1**
PM_{10}	24-hour	**22.06**	510.918	4957.050	41.97	**5**
	Annual	**3.57**	510.900	4957.040	42.06	**1**
NO_2	Annual	**14.29**	510.918	4957.050	41.97	**1**
CO	1-hour	655.41	510.890	4957.030	42.31	**2000**
	8-hour	**524.40**	510.890	4957.030	42.31	**500**

D. Combined Source Modeling Impacts

For predicted modeled impacts from PTL alone that exceeded significance levels, as indicated in boldface type in Table III-3, other sources not explicitly included in the modeling analysis must be accounted for by using representative background concentrations for the area.

Background concentrations, listed in Table III-4, are derived from representative rural background data for use in the Eastern Maine region.

TABLE III-4 : Background Concentrations

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)	Date
SO_2	3-hour	24	2003 [1]
	24-hour	13	
	Annual	5	
PM_{10}	24-hour	42	1994 [2]
	Annual	10	
NO_2	Annual	11	1995 [3]
CO	8-hour	2,284	1989 [4]

Notes:
[1] Robinson Site, Easton
[2] Background Site, Baileyville
[3] TLSP Site, Cape Elizabeth
[4] Bald Mountain Site, Dedham

MEDEP examined other area sources whose impacts would be significant in or near PTL's significant impact area. Due to the applicant's location, extent of the significant impact area and nearby source's emissions, MEDEP has determined that no other sources would be considered for combined source modeling.

For pollutant averaging periods that exceeded significance levels, the maximum modeled impacts from the model predicting the highest concentrations were added with conservative rural background concentrations to demonstrate compliance with MAAQS, as shown in Table III-5. Because all pollutant/averaging period impacts using this method meet MAAQS, no further MAAQS modeling analyses need to be performed.

TABLE III-5 : Maximum AERMOD-PRIME Combined Sources Impacts

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Back-Ground ($\mu g/m^3$)	Max Total Impact ($\mu g/m^3$)	MAAQS ($\mu g/m^3$)
SO_2	3-hour	**48.06**	510.890	4957.030	42.31	**24**	**72.06**	**1150**
	24-hour	**33.10**	510.900	4957.040	42.06	**13**	**46.10**	**230**
	Annual	**5.36**	510.918	4957.050	41.97	**5**	**10.36**	**57**
PM_{10}	24-hour	**22.06**	510.918	4957.050	41.97	**42**	**64.06**	**150**
	Annual	**3.57**	510.900	4957.040	42.06	**10**	**13.57**	**40**
NO_2	Annual	**14.29**	510.918	4957.050	41.97	**11**	**25.29**	**100**
CO	8-hour	**524.40**	510.890	4957.030	42.31	**2,284**	**2808.40**	**10000**

E. Increment

The AERMOD-PRIME refined model was used to predict PTL's maximum Class II increment impacts in all areas.

Results of the single-source Class II increment analysis are shown in Tables III-6. All modeled maximum increment impacts were below all increment standards. Because all predicted increment impacts meet increment standards, no further Class II SO_2, PM_{10} and NO_2 increment modeling for PTL needed to be performed.

TABLE IV-6 : Class II Increment Consumption – PTL Alone

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Class II Increment ($\mu g/m^3$)
SO_2	3-hour	**48.06**	510.890	4957.030	42.31	**512**
	24-hour	**33.10**	510.900	4957.040	42.06	**91**
	Annual	**5.36**	510.918	4957.050	41.97	**20**
PM_{10}	24-hour	**22.06**	510.918	4957.050	41.97	**30**
	Annual	**3.57**	510.900	4957.040	42.06	**17**
NO_2	Annual	**14.29**	510.918	4957.050	41.97	**25**

Federal guidance and 06-096 CMR 140 requires that any source undergoing a major modification provide additional analyses of impacts that would occur as a direct result of the general, commercial, residential, industrial and mobile-source growth associated with the construction and operation of that source.

GENERAL GROWTH: Very minimal increases in local emissions due to construction related activities are expected to occur, as the proposed modification will involve relatively minor and short-lived general construction. Increases in potential emissions of NO_x due to increased traffic to the facility will be minimal, as there will be an insignificant increase in truck traffic in and out of the landfill area. Fugitive PM emissions (if any) will be minimized by the use of "Best Management Practices".

RESIDENTIAL, COMMERCIAL AND INDUSTRIAL GROWTH: Population growth in the impact area of a proposed source can be used as a surrogate factor for the growth in emissions from combustion sources. Since the population in Penobscot County has increased approximately 1% since the minor source baseline date was established and the modification is not expected to create any new jobs, no new significant residential, commercial and industrial growth will likely follow from the modification associated with this source.

MOBILE SOURCE AND AREA SOURCE GROWTH: Since area and mobile sources are considered minor sources of NO_2, their contribution to increment has to be evaluated. Technical guidance from the Environmental Protection Agency points out that screening procedures can be used to determine whether additional detailed analyses of minor source emissions are required. Compiling a minor source inventory may not be required if it can be shown that little or no growth has taken place in the impact area of the proposed source since the baseline date (February 8, 1988) was established. Emissions during the calendar year 1987 are used to determine baseline emissions. As stated

previously, the population in Penobscot County has increased approximately 1% since the minor source baseline date was established; therefore, no further assessment of additional area source growth of NO_2 increment is needed.

Any emissions associated with the minimal increases in vehicle miles traveled have been more than offset by decreases in NO_x emissions in terms of reduced average grams-per-vehicle-mile emission rates since the minor source baseline date was established. Therefore, no increase in actual NO_x emissions from mobile sources is expected. No further detailed analyses of mobile NO_2 emissions are needed.

F. Class I Impacts

Based upon the distance from PTL to the nearest Class I area (53 kilometers) and the magnitude of emissions increase, the affected Federal Land Managers (FLMs) and MEDEP-BAQ have determined that an assessment of Class I increment standards and Air Quality Related Values (AQRVs) is not required.

G. Summary

In summary, it has been demonstrated that PTL in its proposed configuration will not cause or contribute to a violation of any SO_2, PM_{10}, NO_2 or CO averaging period MAAQS or any SO_2, PM_{10} or NO_2 averaging period Class II increment standards.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-850-77-3-A pursuant to the preconstruction licensing requirements of *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 1, 2005) and subject to the standard and special conditions below.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

Condition (1) (C) of New Source Review Amendments A-850-77-2-A and A-850-77-4-M is Deleted.

Condition (2) of New Source Review Amendments A-850-77-2-A and A-850-77-4-M is Deleted.

The following are new Conditions:

(3) Landfill Gas-Fired Engines

A. PTL shall fire only landfill gas, natural gas, or propane in the engines. [06-096 CMR 115, BACT]

B. Emissions from the Landfill Gas-Fired Engines shall each not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority	Enforceability
PM	0.05	06-096 CMR 115, BACT	**Federally Enforceable**

Pollutant	g/bhp-hr	Origin and Authority	Enforceability
CO	2.75	06-096 CMR 115, BACT	**Federally Enforceable**

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.49	06-096 CMR 115, BACT	**Federally Enforceable**
PM_{10}	0.49	06-096 CMR 115, BACT	**Federally Enforceable**
NO_X	1.94	06-096 CMR 115, BACT	**Federally Enforceable**
CO	8.90	06-096 CMR 115, BACT	**Federally Enforceable**

C. PTL shall operate the engines such that the visible emissions from each stack does not exceed 20% opacity on a six (6) minute block average basis, for more than two (2) six (6) minute block averages in a 3-hour period. [06-096 CMR 115, BACT]

D. Compliance with the CO g/bhp-hr emission limit shall be demonstrated by stack testing performed within 180 days of startup and once per calendar year for three years with no less than eight months between tests. Each test shall be performed on an engine not tested in the previous two calendar years. After three years, testing will be upon the request of the Department. [06-096 CMR 115, BACT]

E. PTL shall stack test for PM, NO_x, and VOC within 180 days of startup and once per calendar year for three years with no less than eight months between tests. Each test shall be performed on an engine not tested in the previous two calendar years. After three years, testing will be upon the request of the Department. [06-096 CMR 115, BACT]

(4) Monitoring Requirements

The following are identified as Periodic Monitors:

1. Maintenance performed on each engine;
2. Monthly operating time for each engine;
3. Monthly gas flow to the flare;
4. Monthly gas flow to the engines.
5. H_2S concentration and gas flow rate entering TRS control equipment recorded twice per day.

6. H_2S concentration and gas flow rate exiting TRS control equipment recorded twice per day.
7. Calibration of H_2S analyzers and flow monitors twice per year.

(5) Facility Wide Emission Limits

PTL shall not exceed the following emission limits on a 12 month rolling total basis [06-096 CMR 115, BACT]:

Pollutant	Ton/year
PM	9.1
PM_{10}	9.1
SO_2	25.0
NO_x	31.8
CO	175.5
VOC	41.4

(6) SO_2 Emissions

A. Beginning on January 1, 2008, SO_2 emissions from Flare #3 and the Landfill Gas-Fired Engines combined shall not exceed 5.71 lb/hr on a 12-month rolling average basis except for periods of maintenance and unavoidable malfunction (as described in 38 M.R.S.A. §349.9) of the TRS control equipment. [06-096 CMR 115, BACT]

B. PTL shall install and operate TRS control equipment as necessary on the landfill gas to achieve (on a 12-month rolling average basis) a removal efficiency of 85% or an outlet concentration of 200 ppm, whichever is less stringent, and to control emissions of SO_2 to the emission limit in Condition (6)(A) prior to January 1, 2008. Any change in the type or configuration of the TRS control equipment used must be submitted to the Department prior to use. Compliance testing of any alternative control equipment shall be performed within 60 days of beginning operation. [06-096 CMR 115, BACT]

C. Compliance with the SO_2 lb/hr limit and the TRS control equipment efficiency requirement shall be based on sampling of the landfill gas entering and exiting the TRS control equipment three times on one day twice per month (i.e, three samples at the inlet to the scrubber and three samples at the scrubber outlet) using a test method approved by the Department. PTL shall record the gas flow rate at the time of sampling. There shall be no fewer than seven days between sampling events. The average of the six inlet samples and six outlet samples shall determine the result for that month. It will be assumed that all remaining sulfur in the landfill gas is converted to SO_2 and emissions calculated accordingly. Compliance with the SO_2 lb/hr limit and the control efficiency requirement or alternative ppm limit shall be based on a 12-month rolling average. [06-096 CMR 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/3/07
Date of application acceptance: 4/10/07

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.